



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE
OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION
FOR THE ADVANCEMENT OF SCIENCE.

FRIDAY, SEPTEMBER 2, 1904.

CONTENTS:

<i>The International Congress of Arts and Science</i> ; PROFESSOR HUGO MÜNSTERBERG.....	289
<i>The Endowment of Astronomical Research</i> : PROFESSOR EDWARD C. PICKERING.....	292
<i>The Changing Attitude of American Universities towards Psychology</i> : DR. BURT G. MINER	299
<i>Scientific Books:—</i>	
<i>Farrington's Gems and Gem Minerals</i> : DR. GEORGE F. KUNZ. <i>Getman's Laboratory Exercises in Physical Chemistry</i> : PROFESSOR W. LE CONTE STEVENS.....	307
<i>Discussion and Correspondence:—</i>	
<i>The Use of Roman Numerals</i> : DR. ROBERT M. YERKES	309
<i>Special Articles:—</i>	
<i>Pupation of the Kelep Ant</i> : O. F. COOK. <i>Importance of Isolated Rearings from Culicid Larvæ</i> : E. P. FELT, D. B. YOUNG..	310
<i>Votes on Social and Economic Science:—</i>	
<i>Agricultural Economics; Scientific Agriculture in Japan; Changes in British Agricultural Policy; The Agricultural Policy of Germany</i> : DR. JOHN F. CROWELL.....	313
<i>Cooperation in Solar Research</i>	316
<i>Invitation to the International Congress of Arts and Science</i> : PRESIDENT NICHOLAS MURRAY BUTLER, PROFESSOR SIMON NEWCOMB	317
<i>Scientific Notes and News</i>	317
<i>University and Educational News</i>	320

MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-Hudson, N. Y.

THE INTERNATIONAL CONGRESS OF ARTS AND SCIENCE.

THE widespread interest in the International Congress of Arts and Science, to be held at the St. Louis World's Fair from the nineteenth to the twenty-fourth of September, may justify a word concerning the latest stages of its development. SCIENCE has carefully sketched its beginning and its growth. Full discussions characterized the uniqueness of its plans and purpose and the scientific aims which are so different from the usual congresses with their disconnected programs and their lack of unity. These papers showed that the congress was to be controlled by the single purpose to work towards the unity and inner relation of knowledge; and that its program was a complete whole whose parts were in closest relation. The whole range of sciences is embraced, while the entire field was divided into twenty-four departments and these into one hundred and thirty sections. The addresses to be prepared by invited speakers are to deal in all departments alike with the inner unity and with the fundamental conception and methods, and in all sections alike with the interrelations to the neighboring sections and with the leading problems of the day. The discussion of the whole plan was followed in SCIENCE by reports with regard to the actions of the organizing committee that, under the leadership of Professor Newcomb, the president of the congress, secured the cooperation of leading specialists abroad. And, when at the beginning of June the list of chairmen and official speakers was completed and

published, SCIENCE reprinted the imposing list of participants for those departments which stand nearest to the interests of the magazine.

Since the program with the names of the hundred and sixty departmental and sectional chairmen and the three hundred and twenty official speakers has been published, only a few changes and additions have occurred in that part of the preparations. To be sure, some of the foreign speakers were obliged to withdraw at this late hour, but in most cases the cable filled quickly the vacancies with well-known substitutes from the same countries. In two or three cases two sections have been fused into one in accordance with special wishes. The few positions of chairman which appeared still vacant in the printed program have since been filled; the chairmen are without exception Americans. Among the speakers about a third are foreigners, representing all countries important in scholarship. Even Japan fills four important places. Canadians and Mexicans are counted as Americans.

In two respects the official list has since been supplemented. Firstly, each section has now its special secretary; and the honorary list of the hundred and thirty secretaries will be published in the September edition of the program. Further, most of the sections have an additional array of shorter contributions. As the introduction of the program said from the start, every sectional meeting should offer not only the two official addresses which form a part of the interrelated plan, but also some shorter contributions and communications by well-known specialists on special problems dictated by their own interests without immediate relation to the unity of the program. The official address on the problems of the section forms the natural transition to such special papers exemplifying the work of to-day in the field of the

section. The invitations for such shorter contributions have been sent out at the suggestions of the different chairmen, and the chairmen themselves had been chosen at the suggestion of a majority of workers in the special field. But in most sections there is still ample room for any interesting short communication to be offered and any one may enter into negotiations with the chairman of the section to which his paper would belong. In those sections in which the time will not be entirely filled by the short papers discussions will be in order.

An important problem has been the distribution of halls for the meetings. The temporal distribution of the proceedings had already been sketched in the appendix of the program, and it may be said here, by the way, that *everybody can get the program by sending his address to Mr. Howard J. Rogers, Director of Congresses, World's Fair, St. Louis*. This appendix indicated the effort to avoid, as far as possible, every conflict between sections of related interests. Every participant can attend on Tuesday the meetings of three departments and in the following four days the meetings of eight sections, of which each fills a forenoon from ten to one o'clock or an afternoon from three to six. In this way sixteen sections always meet at the same time, but hardly ever sections of the same larger department. On Wednesday, September 21, from ten to one there will be meetings for instance of the following sixteen sections: Metaphysics, history of Greece, history of common law, comparative language, Slavic literature, inorganic chemistry, astrometry, geophysics, meteorology, animal morphology, social structure, public health, otology, civil engineering, public finance and the family. There is hardly a serious conflict of interests. The philosopher, for instance, has on that morning merely his one section on metaphysics while he can attend on the same day in the after-

noon the section philosophy of religion, on Thursday morning the section logic, on Thursday afternoon the section methodology of science, on Friday morning the section ethics, on Friday afternoon the section esthetics, on Saturday morning the section of comparative psychology and on Saturday afternoon the section abnormal psychology. In the same way the chemist, for instance, has Wednesday morning inorganic chemistry, in the afternoon organic chemistry, Thursday morning physical chemistry, in the afternoon physiological chemistry, Friday morning technical chemistry and so on.

It has been thus necessary to secure sixteen halls for the congress, all on the World's Fair grounds. The accommodations of the gigantic fair are amply sufficient for this purpose. We have the festival hall with its seating capacity of four thousand and convention hall with one thousand seats, the congress hall, the hall in the Missouri state building and in the transportation building, each with nearly a thousand seats and a dozen more halls with seats for two to six hundred. The chief aim in the distribution was again to bring together all that is internally related. As far as possible all sections of the same department will meet in the same hall. The lawyers will find all their legal sections in the Missouri building, the medical men will have most of the medical section in the transportation building, the sociologists theirs in recital hall, the pedagogical section will be in the educational building and so on.

There is no doubt this use of all the large halls of the World's Fair will make it comfortable for the audiences even if twenty thousand flock together during the congress week, as of course the large majority would not attend meetings from Monday till Saturday evening without interruption. It may be expected that most guests will attend three or four sections only and will

enjoy the fair in the intervals. Twenty thousand ought to be, indeed, the figures of attendance to make use of the seating capacity. Will these twenty thousand really come? If the situation were correctly understood over the land the figure would probably be still larger; five thousand men interested in law or politics or social sciences, five thousand men interested in medicine or natural sciences, five thousand men interested in education, in history or philology or philosophy or mathematics, five thousand men interested in religion, in art, in literature, and there remain still the thousands interested in technology and many other departments. The congress boards hope that these figures are not an excessive calculation.

Only one thing seems to stand in the way of such wide attendance: the unfortunate rumor that the congress does not wish such popular participation. It seems that the misunderstanding arose as though this congress were not intended for the general public, but merely for a narrow set of selected specialists. Nothing can distort more the real intentions. Again and again we receive requests that we send an invitation to that or that friend. The fact is, *every educated man or woman who can appreciate the proceedings, especially every collegiate or professional man, is heartily welcome without any invitation.* The congress does not even demand any fees. While, for instance, the congresses connected with the Paris exhibition asked for considerable admission fees, the International Congress of Arts and Science in St. Louis requires nothing at all but the signing of one's name on the list of participants. The misleading rumor started probably from the fact that the chairmen, secretaries and speakers received special invitations. That, to be sure, was demanded by the whole idea of this congress: that the leading actors had to be selected a long time beforehand as

their work has to form a connected whole, but that does not involve a selection of the public which is to profit from the offerings.

It is true the rumor may have been re-enforced by the fact that a limited number of scholars received, indeed, a special invitation to attend in form of a circular, but there was not the slightest intention to indicate that those who did not receive it were less welcome in the audience. To invite all who might have an interest in the proceedings of one of the hundred and thirty sections would have meant to invite half a million persons; every school teacher, every lawyer, every physician, every engineer, every political man, every literary man, yes, every educated business man, would have relations to some of the sections. No committee would have had the right to pick out among that half million those who are especially welcome at the congress, and the fact is no one dared to undertake any such selection. The only thing which the committee believed to be its duty was to send a program and invitation to at least a few thousand from whom special interest could be expected, that is, to the members of the leading national scholarly societies. It is clear that this means not a personal selection; the greatest scholars of the country may by chance not belong to any of these national societies. And thus it has happened, indeed, that some have received such invitations while others of the same high standing did not receive them; a differentiation was not intended at all. The membership lists of some dozen societies were used merely as help in spreading our programs, and it was hoped that every one who received the program would circulate it in his circle and interest his friends in the participation. We should have liked better to send it to half a million, leaving out no student who feels himself interested in any one part of the feast.

Of course the misunderstanding is

limited to some quarters; many other symptoms show that the attendance will, indeed, come up to the unusual opportunity. Especially welcome is the movement which seems under way in some western colleges which begin as early as the middle of September. It is planned there to give leave of absence to those instructors who want to attend the congress. The eastern universities, of course, begin late enough to make it possible anyhow for the whole teaching staff to attend the meetings. It is to be hoped that the schools too will adopt a liberal policy and give leave to every teacher who is anxious to go to St. Louis, as this chance to come in close contact with the leading scholars in every field and to take part in this organized effort to bring harmony into the scattered mass of human knowledge is certainly a liberal education for every high aiming teacher. This six-day autumn school promises, indeed, to offer more than all the summer schools of this country and abroad together. Such a combination of speakers was never before brought together—may the combination of listeners and participants show worthy of the unique occasion.

HUGO MÜNSTERBERG.

HARVARD UNIVERSITY.

THE ENDOWMENT OF ASTRONOMICAL RESEARCH.

IN order to attain as great an advance in astronomical research during the twentieth century as in the nineteenth, careful plans must be made for its endowment. The same skill in organization, combination of existing appliances, and methodical study of detail, which in recent years has revolutionized many commercial industries, should produce as great an advance in the physical sciences. Astronomy in particular, through the striking progress it has made during the last half century, and its appeal to the imagination, has received